Patent Claims

1. Optical system, preferably for a fundus camera, which has a substantially coaxial illumination beam path and imaging beam path, comprising a lens system of at least four lenses, wherein at least two lenses are tilted with respect to their optical axes relative to the illumination beam path and imaging beam path, wherein the optical axes of the lenses and the optical axis of the illumination beam path and imaging beam path lie in a plane, characterized in that at least two additional lenses are tilted with respect to their optical axes relative to the illumination beam path and imaging beam path, and in that the optical axes of the two additional lenses and the optical axis of the illumination beam path and imaging beam path lie in a second plane which intersects the first plane substantially along the optical axis of the illumination beam path and imaging beam path.

2. Optical system according to claim 1, characterized in that the first plane and the second plane extend substantially perpendicular to one another.

3. Optical system according to claim 1 or 2, characterized in that the optical axis of the illumination beam path and imaging beam path penetrates the lenses outside their optical axes.

4. Optical system according to claim 1, 2 or 3, characterized in that the optical axes of the lenses are arranged outside the beam bundle of the illumination beam path and imaging beam path.

5. Optical system according to claim 1, 2, 3 or 4, characterized in that the lenses comprise lens segments.

6. Optical system according to claim 1, 2, 3 or 4, characterized in that at least one of the lenses has an aspheric surface.

7. Optical system according to claim 1, 2, 3 or 4, characterized in that at least one lens is replaced by a diffractive optical element.